IN THE SPECIFICATION

Please amend the paragraph beginning at page 1, line 10, to read:

For example, a thermoelectric module used in a temperature controller for maintaining a constant temperature of a laser diode is shown in Figs. 10 and 11. The thermoelectric module shown in those figures is designed such that a plurality of lower electrodes 4 formed on a lower substrate 2 and a plurality of upper electrodes 5 formed on an upper substrate 3 are bonded to the respective end portions of a plurality of thermoelectric semiconductor chips 6 through first solder. The plurality of thermoelectric semiconductor chips 6 thus structured are connected in series to each other through the plurality of electrodes 4 and 5, and the respective lower electrodes 4 bonded to both end ones of those thermoelectric semiconductor chips 6, thus connected in series to each other, are soldered to corresponding lead wires 9. The lower substrate 2 and the upper substrate 3 are substantially identical in the dimensional configuration with each other. A lower surface of the lower substrate 2 is thickly covered with second solder 7 in advance, and an upper surface of the upper substrate 3 is thickly covered with third solder 8 in advance. The liquidus temperature of the second solder 7 (melting point in case of eutectic solder) is set to be lower than the solidus temperature of the first solder [[1]] (melting point in case of eutectic solder), and the liquidus temperature of the third solder 8 is set to be lower than the solidus temperature of the second solder 7.

Please amend the paragraph beginning at page 3, line 13, to read:

In order to facilitate the soldering of the lead wires 9 to the lower electrodes 4, as shown in Figs. 14 and 15, another conventional thermoelectric module is equipped with a protrusion 2a that protrudes ~~from~~ relative to the upper substrate 3 at a side of the lower substrate 2A where the lead wires 9 are drawn (thermoelectric module [[1A]] 1).

Please amend the paragraph beginning at page 4, line 10, to read:

As a manner for solving the above problem, there has been proposed that, in the above-mentioned thermoelectric module 1A structured as shown in Figs. 14 and 15, a center portion of the protrusion 2a of the lower substrate 2A where no lead wires 9 is disposed [[are]] is pushed by a single support arm A under pressure and horizontally rocked to bond the lower substrate 2A of the thermoelectric module 1A to the butterfly package B through the second solder 7A. However, in this example, since the lower substrate 2A must be pushed under pressure from only one end portion of the lower substrate 2A by the support arm A, an opposite side of the lower substrate 2A floats up, and foreign material such as air bubbles or dust is incompletely removed from the interior of the melted second solder 7A with the result that the second solder 7A cannot be thinned and uniformed in thickness. Therefore, a heat resistance between the lower substrate 2A and the butterfly package B cannot be satisfactorily reduced.

Please amend the paragraph beginning at page 9, line 11, to read:

Referring to those figures, 24 thermoelectric semiconductor chips 15 arranged in 6 rows x 4 columns are connected in series to each other in such a manner that a plurality of lower electrodes (first electrodes) 13 formed on a lower substrate (first substrate) 11 and a plurality of upper electrodes (second electrodes) 14 formed on an upper substrate (second substrate) 12 are bonded to the respective end portions of those thermoelectric semiconductor chips 15 through first solder, and both ~~end ones~~ ends of those lower electrodes 13 that are connected in series are soldered with lead wires 18, respectively. The respective substrates 11 and 12 are formed of rectangular ceramic plates, and the lower substrate 11 is formed with a pair of protrusions 11a that protrude ~~from~~ relative to both ends of the upper substrate 12 in a

longitudinal direction thereof when being viewed vertically from the upper side. Both ~~end ones~~ ends of the lower electrodes 13, each of which is soldered with the lead wire [[12]] 18, extend on one (right side in Figs. 1 and 2) of those protrusions 11a. The respective electrodes 13 and 14 are formed by subjecting the surfaces of the respective substrates 11 and 12 to electroless plating through metallized layers, respectively, and second solder 16 and third solder 17 are thickly formed on the rear surfaces of the respective lower and upper substrates 11 and 12. The first solder is solder of Sn/B = 95/5 (232°C in solidus temperature, 240°C in liquidus temperature), the second solder 16 is eutectic solder of Sn/Ag = 96.5/3.5 (221°C in melting point), and the third solder 17 is eutectic solder of Bi/Sn = 58/42 (138.5°C in melting point).

Please amend the paragraph beginning at page 12, line 2, to read:

A change in resistance between both of the lead wires 18 before and after the thermoelectric module 10 according to the first embodiment has been thus assembled in the butterfly package B has been measured to confirm whether the thermoelectric module 10 has been assembled therein without being broken~~, not~~. If the change in resistance between both of the lead wires 18 before and after assembling is within 0.5%, it is judged that the assembling is good. In the first embodiment, as shown in Table 1, it has been judged that no defective product existed in 22 test products, and the results were good as a whole.

Please amend the paragraph beginning at page 12, line 12, to read:

A carrier (not shown) on which a semiconductor device, such as a laser diode (not shown) whose temperature is controlled, is mounted, is attached onto the upper substrate 12 through the third solder melted in the same manner as that described above. In this situation, since forces by which the carrier is pushed toward the upper substrate 12 under pressure and

also rocked in a direction orthogonal to the pushing direction are received by the respective thermoelectric semiconductor chips 15, the forces are exerted on the bonding portions of the thermoelectric semiconductor chips 15 and the respective electrodes 13, 14 through the first solder. However, since a temperature difference between the liquidus temperature of the third solder 17 and the solidus temperature of the first solder is large, even if the thermoelectric module 10 is heated up to a temperature at which the third solder 17 is melted, the strength of the bonding portions through the first solder is not deteriorated, and therefore the bonding portions of the thermoelectric semiconductor chips 15 and the respective electrodes 13, 14 through the first solder are not broken.

Please amend the paragraph beginning at page 19, line 12, to read:

On the contrary, according to the thermoelectric module 10 of the above-mentioned respective embodiments, since the lower substrate 11 has a pair of protrusions 11a that protrude ~~from~~ relative to both ends of the upper substrate 12 in the longitudinal direction, when the lower substrate 11 is assembled in the butterfly package B, the respective protrusions 11a are held by the leading edges of the corresponding support arms A to push the lower substrate 11 toward the butterfly package B under pressure without being slanted, so as to be bonded to the butterfly package B through the melted solder. Also, since the lower substrate 11 is rocked in the direction orthogonal to the pushing direction by the support arms A, foreign material such as air bubbles or dust is extruded laterally from the interior of the melted second solder 16 interposed between the lower substrate 11 and the butterfly package B so as to be removed, and the second solder 16 is thinned and uniformed in thickness with the result that a heat resistance between the lower substrate 11 and the butterfly package B can be lessened. Moreover, since the forces for pushing and rocking the lower substrate 11 are transmitted not through the thermoelectric semiconductor chips 15 but

directly to the lower substrate 11 through the respective protrusions 11a, even when a temperature difference between the liquidus temperature of the second solder 16 and the solidus temperature of the first solder is small, the bonding portions of the respective thermoelectric semiconductor chips 15 and the electrodes 13, 14 are not broken, and therefore there is no fear that the thermoelectric module 10 is broken.